Growing WILD

Fall, 1998 *Utah's Project WILD Newsletter*

Utah's Wonderful Waterfowl!

As the warmth of summer slowly gives way to the cool, crisp pleasantness of autumn, an amazing display begins to form on nature's stage. Signaled by some unknown force, thousands of ducks, geese, swans and other migratory waterfowl begin their annual return journeys south from their nesting grounds in the north. Soon, the marshes and lakes of Utah will be alive with a symphony of honking and quacking as these birds invade the state.

In this issue of Growing WILD we will be taking a look at Utah's Wonderful Waterfowl. For many, the word "waterfowl" is synonymous with the word "duck." Usually the first to arrive, ducks make up the largest part of our waterfowl population. Dabbling or puddle ducks such as the mallard, pintail and gadwall are common in and around Utah wetlands. These generally stout and chunky birds are quite showy with the drakes (males) often showing bright colors. Females (hens) are generally more drab in appearance for camouflage on the nest. With their legs placed squarely beneath their bodies, dabblers are fun to watch as they tip their tails in the air to feed, or as they spring into the air on take-off.

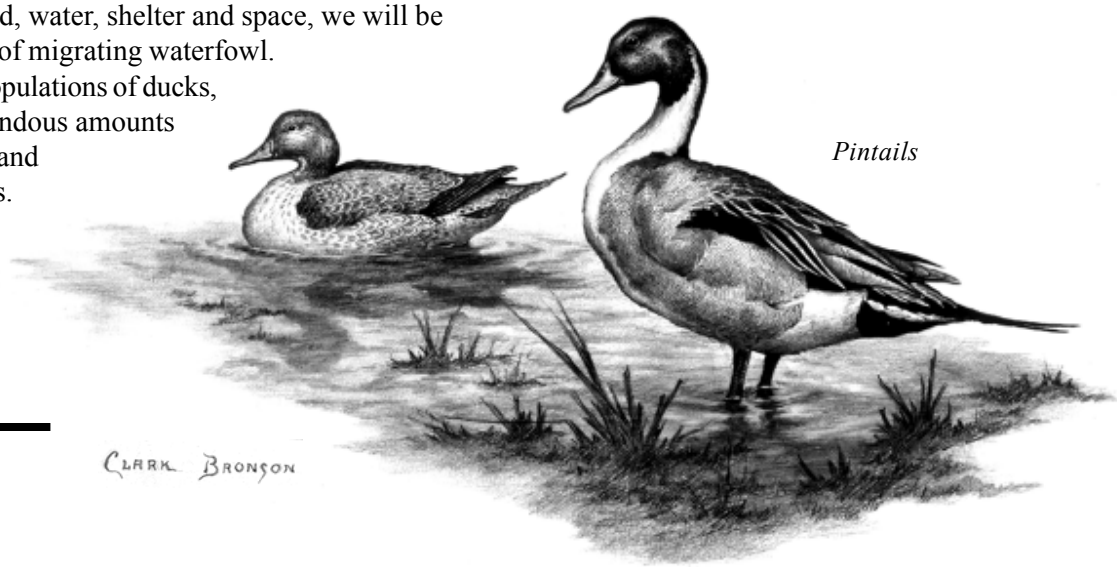
Though not as showy as the dabbling ducks, diving ducks such as the canvasbacks, scaup, and buffleheads are nonetheless amazing creatures. As their name implies, these ducks are able to dive completely under the water to feed on aquatic insects and plants. Strong legs placed near the rear of the body propel these ducks as they run along the surface of the water to gain the speed necessary for a successful take off.

In addition to the ducks, several species of geese will be passing through our area this fall. Snow, Canada, Ross's and white-fronted geese all use Utah wetlands as stopping points along their migration. Much larger than ducks, geese are readily identified by their long necks, large bodies and by the honking sounds they make as they fly overhead. Most of us have witnessed the classic wedge formation of flying geese, a behavioral adaptation that reduces the amount of energy expended on a long flight.

Larger still are the all white trumpeter and tundra swans that will soon be arriving. Once thought to be near extinction, wild swans appear to be making a strong comeback. With their gracefully curved necks and all white plumage, swans are a waterfowl watcher's treat. Long an inspiration for poets, swans are among our most beautiful birds.

More than any other birds, waterfowl are dependant on wetland habitats. Though once threatened by loss of critical habitat, most waterfowl populations seem to be gaining ground in their struggle for survival. Their future, however, certainly rests on man's shoulders. As long as wetlands are available to provide needed food, water, shelter and space, we will be able to enjoy the sights and sounds of migrating waterfowl. Successfully maintaining healthy populations of ducks, geese and swans will require tremendous amounts of cooperation among many public and private organizations and individuals.

We hope you will enjoy this issue of *Growing WILD* as we take a closer look at some of Utah's Wonderful Waterfowl!

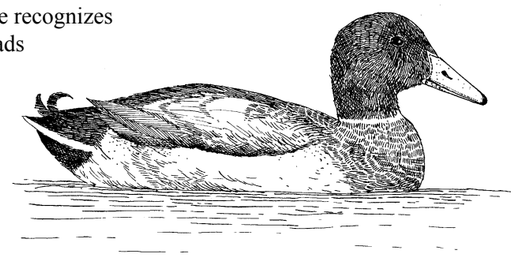


Pintails

Watchable Waterfowl!

Mallard - *Anas platyrhynchos*

Mallards are the "movie stars" of the duck world - almost everyone recognizes them, especially the drakes with their iridescent, emerald green heads and rust-colored breasts, separated by a white collar, and their famous up-turned tail feathers. The hens with their demure, soft-brown and black mottled plumage, in contrast, are most noted for their vocalizations. Their loud "quacking" is one of the first wild sounds many children learn. Although hens are less colorful than drakes, both sport shiny, blue wing patches and yellow feet in the spring that turn bright orange-red in the late fall.



Mallard

Mallards are so popular because they are especially numerous and widespread. They are known by 150 names in 46 different tongues. They have also been associated with people for a long time. Mallards were first domesticated over 2,000 years ago in Mesopotamia and in China, where these relatively large two and one-half pound ducks were bred for producing eggs and meat. Almost all our modern domestic breeds were derived from mallards.

In North America, mallards range from Alaska south to the gulf coast and Mexican border. They are usually found in shallow, quiet waters where they dip and tip for aquatic plants and insects. With serrated bills, they first scoop up food and then squeeze out the water, leaving a mouthful of edibles and grit. When ice closes marshes and ponds, some head for dry land to feed on remnant grain and corn stubble. Others head south to warmer areas where available food can sustain them until spring once again arrives.

Canada Goose - *Branta canadensis*

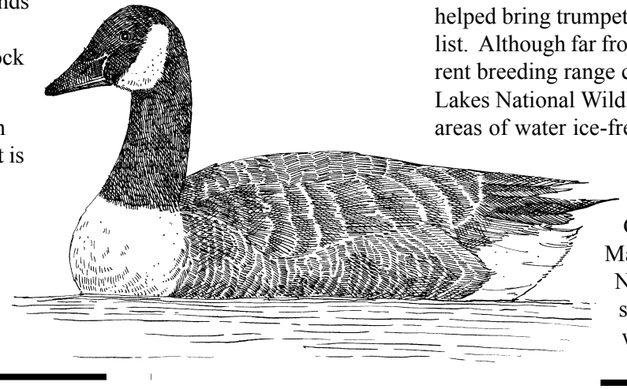
To almost anyone, the word "goose" brings to mind the ubiquitous Canada goose, North America's most abundant and well known goose. Who isn't familiar with this symbol of the changing seasons, referred to by many as "honkers" because of their resonant "ha-lonk ha-lonk" call that penetrates the air each spring and fall? Who hasn't peered upward to catch a glimpse of a passing flock gliding in their characteristic "V" formation on their journeys to lands beyond? Or who hasn't watched a pair of these large, black-hooded, black-billed and black-footed geese with their distinctive white cheek patches, white breast feathers and streaked gray bodies, paddling along with a gaggle of goslings in tow?

Although the Canada goose is familiar to most people, few know that there are 11 races that vary considerably in size and weight. The race that inhabits the Great Basin region is referred to as the Intermountain population. The range of this population extends from the arctic tundra south to California and Arizona. They are a common breeding species at larger lakes and marshes within Utah. Some overwinter as well, depending on severity of the weather.

As fast as spring melts the ice, Canada geese migrate northward to traditional breeding grounds which they tend to occupy year after year. They migrate by day or by night, and the "V" formation in which they often fly is thought to reduce wind drag, allowing members of the flock to conserve energy.

Geese are one of a few species that mate for life. The male, or gander, is slightly larger than its like-patterned female counterpart, called the goose. The nest is built in various places, but is usually isolated, close to water and elevated to provide good visibility in all directions. Artificial nest platforms built by people are readily used.

The family bond in Canada geese is quite strong, and a gander will vehemently guard his family from intruders with loud threatening hisses and snake-like neck movements. Young geese remain with their parents for most of their first year, and migrate as a family so they can learn migration routes and locations of important stop-over resting sites.



Canada goose

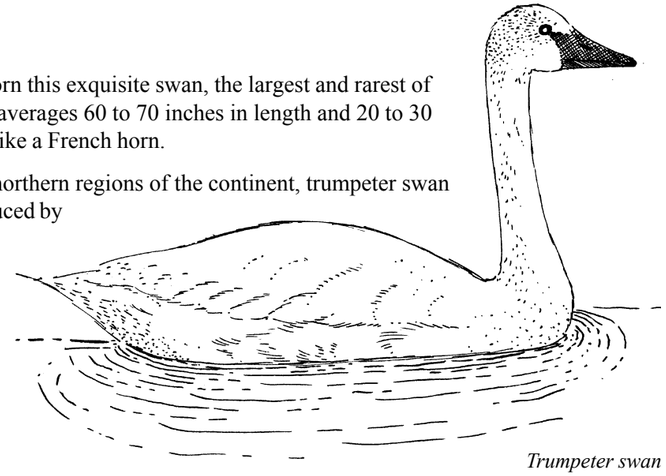
For many species, transformation of native habitats had detrimental impacts. For Canada geese however, this has been beneficial. Farming and development of reservoirs have created new habitats to which geese have readily adjusted. Being partial to upland grazing, cultivated fields have provided an abundant source of nutritious grains and green forage. In many urban settings, geese have found numerous ponds, an abundance of manicured lawns and safety from hunting in places like golf courses, cemeteries and parks. They have been so successful in these settings that in some areas they have become a nuisance.

This fall keep your ears alert and maybe, once again, you'll hear, as Aldo Leopold so eloquently deemed, some wonderful "goose music" filling the air.

Trumpeter Swan - *Cygnus buccinator*

Snowy white feathers and a shiny black bill adorn this exquisite swan, the largest and rarest of all North American waterfowl. An adult swan averages 60 to 70 inches in length and 20 to 30 pounds. Its call, for which it is named, sounds like a French horn.

Formerly abundant and widespread across the northern regions of the continent, trumpeter swan numbers and distribution were significantly reduced by the fur trade and European settlement during the late 18th and 19th centuries. The Hudson Bay Company sold thousands of skins on the London market. Skins were used to make powder puffs and garment ornaments, and the quills made fine pens.



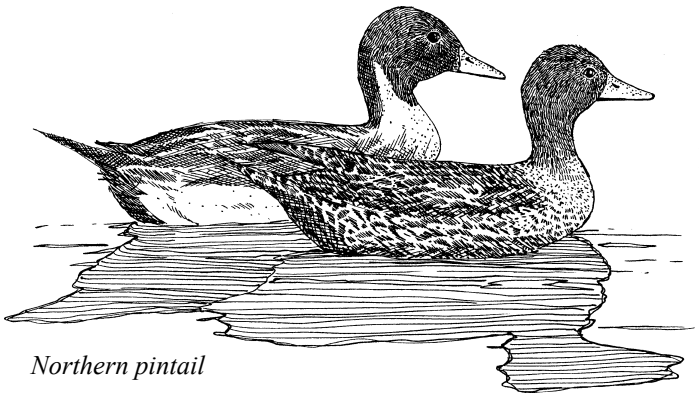
Trumpeter swan

Settlement resulted in the loss of wetlands and associated breeding habitat. Numbers had dropped so drastically that in 1912, Edward H. Forbush, an eminent ornithologist wrote that total extinction of the trumpeter swan was only years away. By 1935, only 69 individuals were known to exist in the United States. Later, several unrecorded flocks were found inhabiting parts of Alaska and Canada.

Swans are a long-lived species with low potential for growth. Males, known as cobs, and females, known as pens, form life-long bonds and often do not begin to breed for two to three years. They nest in large freshwater marshes and lakes, often atop muskrat lodges. To build their nest, the swans uproot marsh plants, like sedges, rushes and cattails surrounding the nest site, leaving a ring of open water around the nest. Mortality of cygnets, the young, can be as high as 50 percent. Subadult mortality is high as well, with about 65 percent attributed to collisions with power lines and fences.

Conservation efforts, including habitat preservation, protection from shooting and restoration programs have helped bring trumpeters back from the brink of extinction. In 1968, they were removed from the endangered list. Although far from secure, a 1990 continent-wide survey found over 15,000 individuals in the wild. Current breeding range consists primarily of scattered sites in Alaska and Canada. Most winter at Red Rock Lakes National Wildlife Refuge in Montana near Yellowstone. This refuge, where warm springs keep small areas of water ice-free during even the severest of winters, was created in 1935 to help trumpeters recover.

With loss in numbers of swans also came the loss of traditional migration routes to other wintering areas. To help with this problem, reintroduction programs to areas within the Great Basin were begun in 1938. In 1939 and 1947, reintroductions were made to Malheur National Wildlife Refuge in Oregon and Ruby Lake National Wildlife Refuge in Nevada, respectively. A few swans were transferred to Utah with hopes that trumpeter swans would follow tundra swans to other southern wintering areas. No long term wintering populations were successfully established in Utah, however.



Northern pintail

Northern Pintail - *Anas acuta*

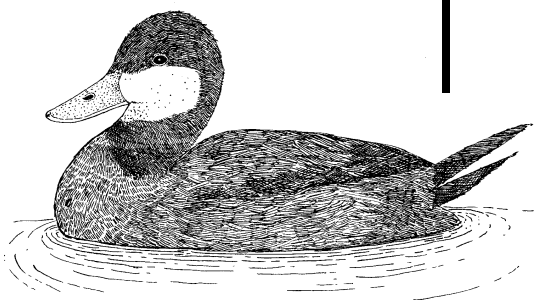
The pintail is one of the first migrants to push northward on the heels of retreating winter, when the ice first starts to break. It occupies the widest breeding range of any duck worldwide, extending its migration to the circumpolar region at the top of the world. Its core nesting habitat is found in Alaska, the Prairie Pothole Region of southern Canada and the northern Great Plains among shallow wetland areas. In Utah, it is classified as an uncommon to abundant breeding species. Nests, deep hollows scooped out in the ground and lined with grass, stubble and down, are placed almost anywhere on dry land and are often not well concealed.

Pintails, streamlined, slender ducks fitted with long narrow wings, are able to fly swiftly and gracefully through the air. Their arrow-shaped form makes them easily identifiable in flight. On water, the especially elegant drakes are easily recognized by their deep, chocolate-brown colored heads, erect on slender white forenecks that extend upward as a stripe onto the back of the head. The back of the neck, body and sides, vermiculated with black, appear gray. And their tails, the species' trademark, consist of a pair of long black feathers called "centrals," flanked by six shorter plumes on each side that form a wedge.

Because of their long necks and tails, pintail drakes can be up to four inches longer than drake mallards, yet weigh one-fifth less. The mottled brownish hens are about the same length as mallard hens, but also weigh significantly less, pointing to the relative slenderness of this duck, sometimes called a "sprig".

Pintails not only rush northward early in spring, but are also one of the first ducks to fly south when frosty nights begin to announce the approach of autumn. Several of their western hemispheric migration routes to wintering areas in California and western Mexico cross the Great Basin, and during the fall, pintails may be the most abundant duck in Utah, with several hundred thousand present at the Bear Lake National Wildlife Refuge.

Ruddy Duck - *Oxyura jamaicensis*



Ruddy duck

The ruddy duck is an odd little duck in a class by itself, differing in several ways from any other North American duck.

First, imagine a small, stocky, one-pound, 15-inch drake floating confidently on a quiet sheltered pond, his back glowing with the rich, red-brown of his nuptial attire, offset by pure white cheek patches, a deep black crown, an uprightly-cocked, fan-shaped tail and an especially bright blue bill, as intense as the clear blue sky.

Next, visualize this only western member of the "stiff-tailed" tribe of ducks, ardently performing a strange "bubbling" courtship display described as follows: the drake first diverts air into a tracheal air sac. He then repeatedly beats his bill against his inflated neck, producing a drumming sound. Air is then forced out from beneath his feathers forming bubbles in the water around his breast. The whole two-second affair is then capped off with the utterance of a belching call. Soon he begins again, and then again.

Now picture a quiet little hen building her nest among the deep cattails and bulrushes, and laying within it, between five and fifteen extra, extra large AA eggs, comparable in size to those of a great blue heron! Also see her dumping a few extra eggs in the nests of other ducks, in a behavior resembling brood parasitism. And last, see her slipping below the water's surface, and swimming with only eyes above, to avoid a hungry predator.

In Utah, you can observe all this by visiting the marshes adjacent to the Great Salt Lake, where over half of the Utah breeding ruddies can be found. Don't wait too long though, because by September they'll be off to spend the winter along the coast of California and western Mexico.

Goal: Students become familiar with characteristics used to identify waterfowl species and then play a game involving art and drama to reinforce what they have learned.

Objectives: Students will: 1) learn about specific features used to identify waterfowl species, 2) use art skills to create models of features used to identify specific species, and 3) use drama skills to display and act out specific waterfowl species.

Background: Waterfowl species, ducks in particular, are among some of nature's most colorful and uniquely patterned creatures. The wood duck, our most brilliantly colored duck, is an excellent example. People who study birds often use these colors and patterns as the first means to identify a species. Male ducks, called drakes, are especially colorful when in their breeding or nuptial plumage. The colors of their heads, breast feathers, bills, wing patches (speculums), feet, eyes and other stuctures are very useful in narrowing down what species one is looking at. Other characteristics that help in identification include body shape and size, wing shape, flight speeds, calls and various behaviors such as diving or tipping to feed, courtship displays and nesting behaviors. Where a particular species is observed is also a helpful clue to its identification.

Materials: Bird field guides, or more specifically waterfowl identification booklets (see internet address http://birding.miningco.com/msub1-ducks.htm for: "Ducks at a Distance" and "Waterfowl Identification in the Central Flyway"); additional reference material for specific species; a wide variety of art materials such as colored construction paper, scraps of material, paints, markers, scissors, tape, glue etc.

Procedure:

1) Have students become familiar with a variety of waterfowl species that one can observe in Utah by studying reference materials and field guides. Have them pay particular attention to colors of various structures, size and shape of species, behaviors characteristic of the species and calls.

2) Next, have each student select one species to portray. Have students choose at random, by perhaps selecting from a hat, and have them keep their selection a secret.

3) Now, have students make and adorn specific waterfowl parts that others can use to identify their species. For example, someone who selected a wood duck could make a red, white and black-tipped bill, a greenish colored hood with white stripes, a red eye-ring and a white throat patch, etc. Also have each student select some specific calls, behaviors and other identifying characteristics of their species that they can dramatize for the class.

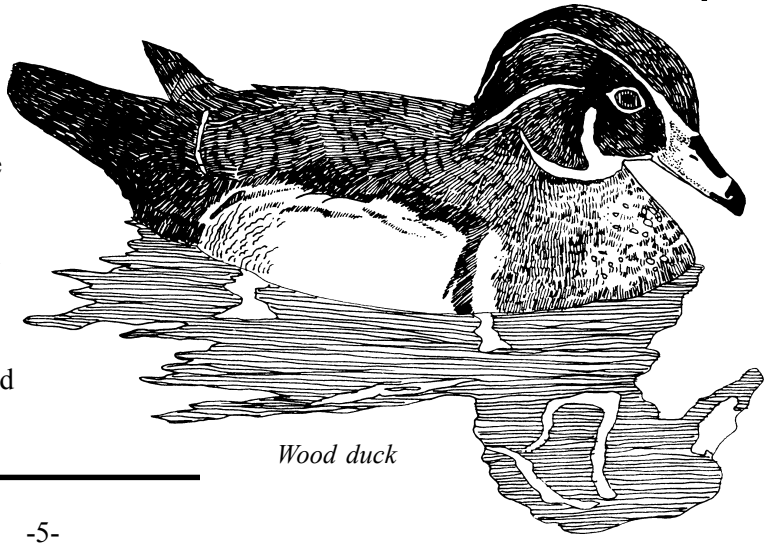
4) Have students take turns displaying and acting out their particular species. Let classmates ask questions of the student whose turn it is so that they can attempt to guess what particular species is being demonstrated. For younger students you may wish to have pictures of the different species visible so they can actually match the species with the student.

Extensions:

1) Make paper-machē ducks and decorate them realistically. Waterproof them with lacquer and mount them on a piece of wood that will float to make decoys.

2) Create a miniature wetland in your classroom with the paper-machē waterfowl and wetland vegetation also made by students.

3) Take a field trip to a local wetland in the spring, and try to identify various species of waterfowl.



Wood duck

Resources

You'll Quack and Honk Over These!!

Call Project WILD at: (801) 538-4719

Waterfowl Resources

Ducks At A Distance: A pocket-sized guide with illustrations and natural history information on the various species of North American waterfowl.

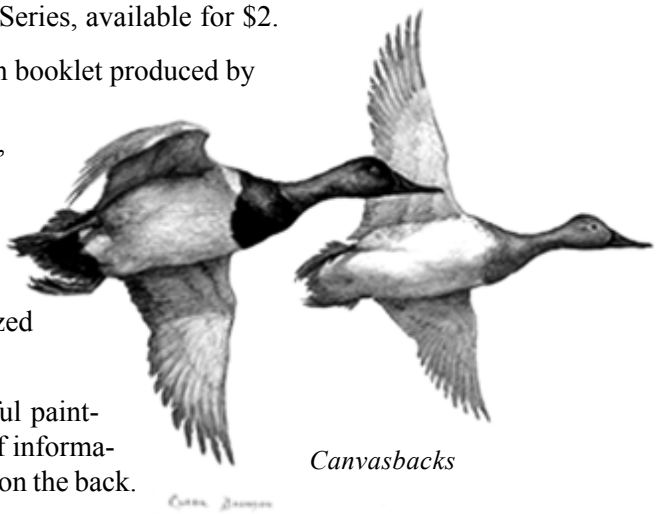
Federal Junior Duck Stamp Conservation Program, K-12: An excellent interdisciplinary activity guide focusing on waterfowl, wetlands and conservation.

Welcome to the Wetlands: Wonderful coloring poster featuring wetland wildlife with information discussing wetland types, wetland values and threats to wetlands included on the back.

Ducks, Geese and Swans: One issue within the "Zoobook" Series, available for $2.

The Trumpeter Swan: Copy of a comprehensive information booklet produced by the Teton Science School.

Celebrate Wetlands!: An insert from "Wild Outdoor World" magazine, containing a fun set of wetland activities.



Canvasbacks

Other Resources

New Utah's Endangered Species Poster: Colorful, mid-sized poster featuring many of Utah's endangered species.

1998 International Migratory Bird Day Poster: A beautiful painting of a variety of neotropical migrant species, with an array of information about bird migration, National Wildlife Refuges and more on the back.

New Kits for Check-out

Owl Box: Contains an owl wing and raptor feather to demonstrate the silent flight of owls, pellet samples, a mounted owl , an array of articles and information, plus more. Owl puppets available too!

Endangered Species Puppet Potpourri: A set of puppets and stuffed animals from around the world with story books, background information, activity guides and posters.

Waterfowl Internet Sites

A nice waterfowl photo gallery - **http://soback.kornet.nm.kr/~pintail/bird/**

DuckData: A bibliographic database for North American waterfowl and their wetland habitats - **http://www.nwrc.gov/duckdata/**

Junior Duck Stamp Homepage - **http://www.fws.gov/r9dso/jds/index.html**

Marsh Birds of northern Utah - **http://www.concentric.net/~Ssbray/marshbrd.htm**

Identifying Ducks and Geese - **http://pages.prodigy.com/biglake/chooseid.htm**

Waterfowl information - **http://home.att.net/~DanCowell/page2.html**

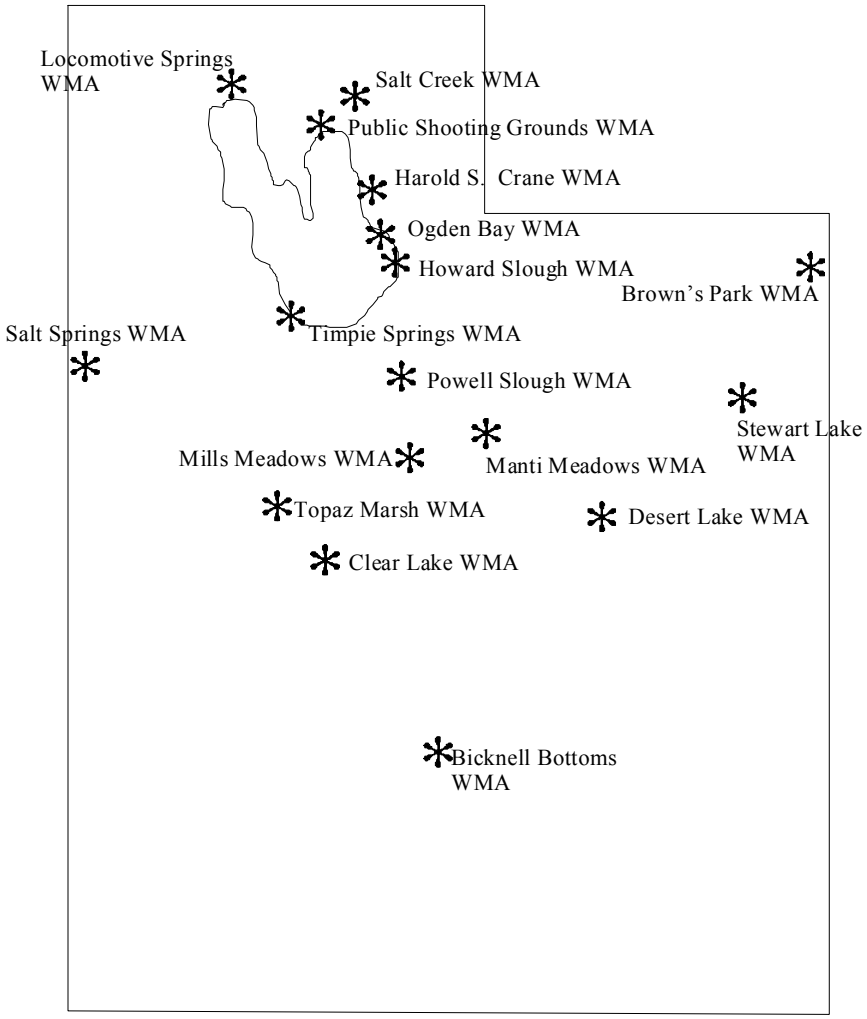
General duck, geese and swan links plus links to online versions of "Ducks at a Distance," "Waterfowl Identification in the Central Flyway" and much more - **http://birding.miningco.com/msub1-ducks.htm**

Action ***Wonderful Waterfowl Watching!***

Utah's Waterfowl Management Areas

All living organisms need a suitably arranged habitat in order to survive. For waterfowl, habitat is synonymous with wetland. Migrating waterfowl use enormous amounts of energy as they make the long trip from their nesting areas to their summer ranges in Central and South America. To successfully make the trip with enough energy to survive, they need frequent stopping places to feed and rest. In order to provide suitable wetland habitat for migrating and resident waterfowl, the Utah Division of Wildlife Resources has developed a network of Waterfowl Management Areas (WMA's) located throughout the various regions of the state. These areas, along with our National Wildlife Refuges, help to provide the necessary food, water, shelter and space for our waterfowl.

Below is a map showing Utah's 18 state operated Waterfowl Management Areas. These areas are open to the public, so find the one nearest your home and plan a trip there to experience some of Utah's Wonderful Waterfowl. Specific directions to each WMA may be obtained from the local Division of Wildlife Resources office.



Issues Investigation

The Snow Goose Dilemma

The Decline

As the human population of the United States rose dramatically during the late 19th and early 20th centuries, many populations of wildlife were greatly reduced. As people moved westward, wetlands and prairies gave way to farmland and cities. Consumer demands for the meat, feathers and fur of wild game increased exponentially in the burgeoning American economy. Like many waterfowl species, snow geese (*Chen caerulescens*) suffered tremendous losses during these times. Loss of habitat, unregulated market hunting, and weak wildlife protection laws left snow goose populations devastated. By the 1930s, greater snow geese in the continental United States numbered only about 3,000 birds. Lesser snow goose populations were similarly depressed. Despite the best efforts of lawmakers and conservationists, snow geese appeared to be headed towards extinction. Hunting seasons were canceled, and an all out campaign to save the snow goose was launched.

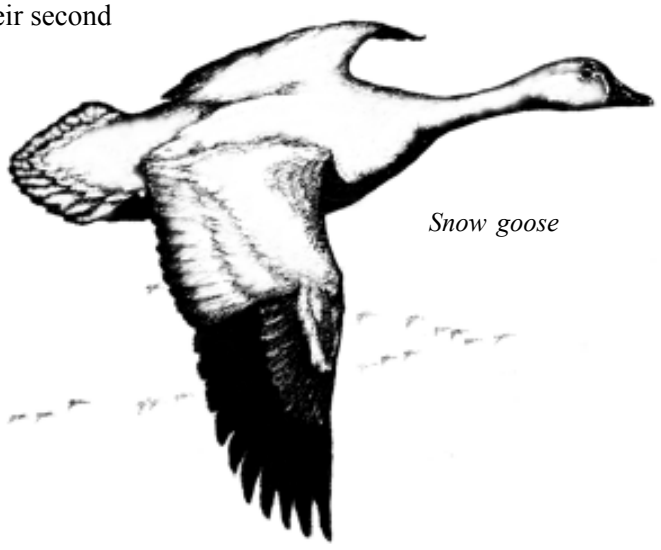
The Recovery

To say that these recovery efforts have been successful would be an enormous understatement. Though initial recovery was slow, snow goose populations have literally exploded during the past 25 years. Current estimates of greater snow goose populations along the Atlantic flyway suggest populations in excess of 600,000 birds, and mid-continental populations of lesser snow geese number between 3.5 and 5 million. Once considered a rare sight, huge flocks of snow geese are now commonplace.

Despite the seemingly phenomenal success of snow goose recovery, all is not well in "Gooseville". This is especially true of lesser snow goose populations. Historically, these populations have been limited by the availability of their primary food source, marsh grasses and shoots. During the past several decades, however, an interesting phenomenon has occurred. With the decline of wetlands available for feeding, the geese have turned to alternate forage sources, namely croplands. Since croplands have increased in size and distribution during the past 50 years as forests have been cleared, snow geese now have virtually unlimited access to high quality winter forage throughout the central and western United States.

The Results

As a result of this behavioral adaptation, coupled with wetland preservation efforts in the United States and Canada, more snow geese are surviving to successfully breed on the arctic tundra. Snow geese generally reach maturity during their second year and will begin breeding during their third season. If habitat conditions are right, a female goose may breed every year for the next fifteen years, hatching up to 10 goslings each year. Even with an estimated 60 percent mortality for these young birds, populations are growing. Growing so fast, in fact, that the fragile arctic habitat that snow geese depend on for nesting is being destroyed. Some of the hardest hit areas are little more than arctic deserts, picked clean by millions of ravenous geese. These same arctic habitats are critical for dozens of other wildlife species, many of which are suffering long term negative effects because of the geese. Many scientists doubt these fragile areas will ever recover.

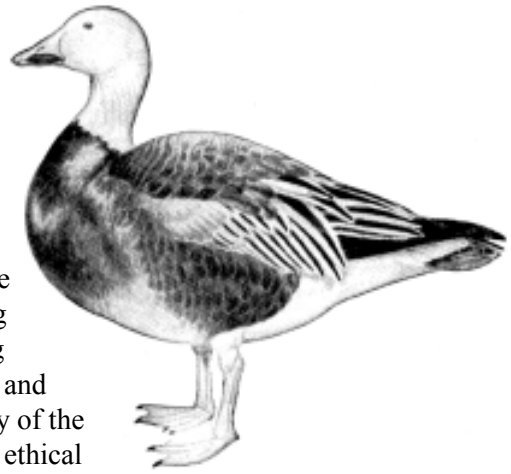


Snow goose

As their nesting habitat continues to deteriorate, snow geese seem to adapt. Reports of molting adults and newly hatched juveniles, both unable to fly, walking 50 miles in search of food are commonplace. Though these long walks result in increased mortality, they also allow the species to expand into new habitat. And, the female young who forage in these new areas will return there to raise their own broods. The ever adaptable geese have now spread to nontraditional nesting areas leading one conservation group to refer to the arctic as an "ecosystem in peril". Secretary of the Interior Bruce Babbitt recently referred to the snow goose situation as being "out of control".

No Easy Answers

The situation in the arctic has become so critical that the Arctic Goose Habitat Working Group, an organization comprised of scientists and wildlife managers from governmental and private groups in the United States and Canada, has called for drastic measures to reduce the numbers of mid-continental lesser snow geese to half the current population by the year 2005. Among the recommendations are proposals to liberalize regulations pertaining to the harvesting of snow geese and their eggs; extending hunting seasons beyond what is currently allowed by international treaty; and once again legalizing market hunting of lesser snow geese. Many of the proposed solutions run contrary to what has become accepted as ethical management and use of these valued resources. There are no easy answers, but it is evident that without drastic measures being taken soon, these fragile arctic ecosystems are in very real danger of collapse.



Snow goose (blue phase)

Classroom Extenders

1) Have students brainstorm a list of possible solutions to the "Snow Goose Dilemma". Research the pros and cons of each solution and try to come up with a workable solution. Discuss potential tradeoffs for each solution.

2) Have students research similar "success" stories in modern wildlife management. Are there other species which have recovered from the edge of extinction to become a threat to their own survival?

3) Make a trip to a wetland area near your school to look for snow geese. Most major wetlands throughout Utah have geese during fall and spring migrations. Contact the Division of Wildlife Resources for assistance. Plan a visit to the Division of Wildlife Resources Snow Goose Festival near Delta in February where thousands of snow geese can be observed in a single day.

4) Research state and federal laws and international treaties that deal with migrating birds. What do these laws and treaties require?

5) Have students research the history of waterfowl management in the United States. What laws affect waterfowl management in our country and state?

6) Have students research and contact conservation organizations involved in the snow goose situation. What light can these organizations shed on the situation?

Learn More

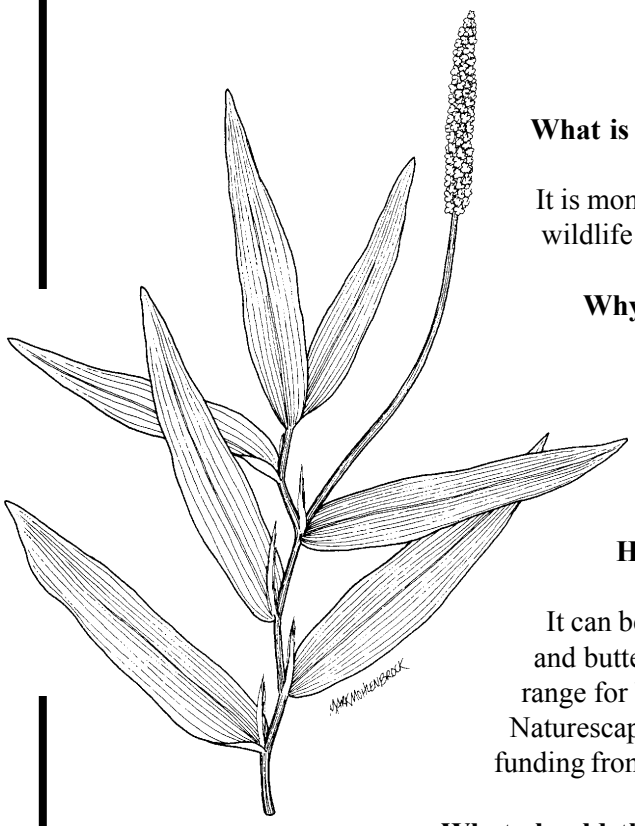
Snow Goose Facts! - Request a "Wildlife Photo Series" style card with a beautiful snow goose image and information on the back from Project WILD at (801) 538-4719.

Wild Wings Heading North - Visit this internet site where you can track and follow the actual migration of snow geese. **http://north.audubon.org/**

Action

School Yard Naturescaping Grants

Win a $300 student action grant from Project WILD for the 1998-1999 school year!



White-stem pondweed

What is a Naturescaping Grant?

It is money for students to conduct an action project to establish wildlife habitat on or near their school grounds.

Why does it focus on habitat?

Providing habitat for wildlife is of increasing importance. Naturescaping projects allow students to take positive actions which will result in long-term benefits for wildlife.

How large a project does it have to be?

It can be as simple as planting native plants for birds and butterflies or as extensive as revegetating winter range for big game animals. Many schools use the Naturescaping Grant as "seed" money and solicit additional funding from community and school sources.

What should the emphases be?

- To involve students in the project planning and implementation
- To design areas for interdisciplinary studies
- To plant native species
- To correlate the project to the state core curricula

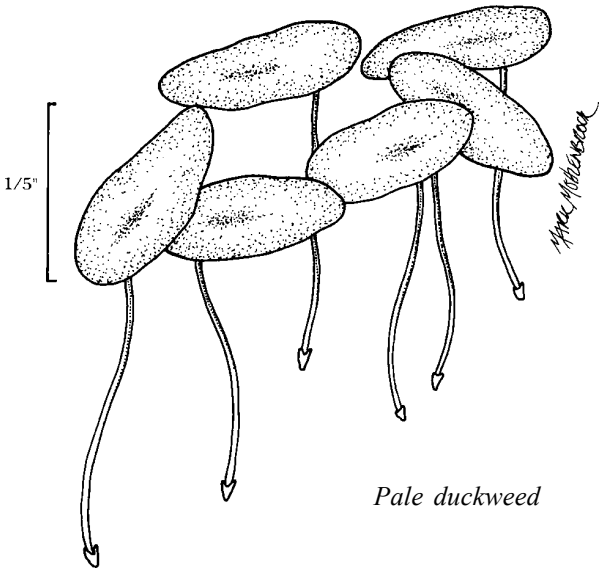
How do you apply?

- Request an application from:

  Project WILD
  Utah Division of Wildlife Resources
  1594 West North Temple, Ste. 2110
  PO Box 146301
  Salt Lake City UT 84114-6301

  (801) 538-4719

- Complete the application form and return it to the Project WILD office by ***November 15, 1998.***



Pale duckweed

Wildlife Ethics

"Babes do not tremble when they are shown a golf ball, but I should not like to own the boy whose hair does not lift his hat when he sees his first deer."

--Aldo Leopold

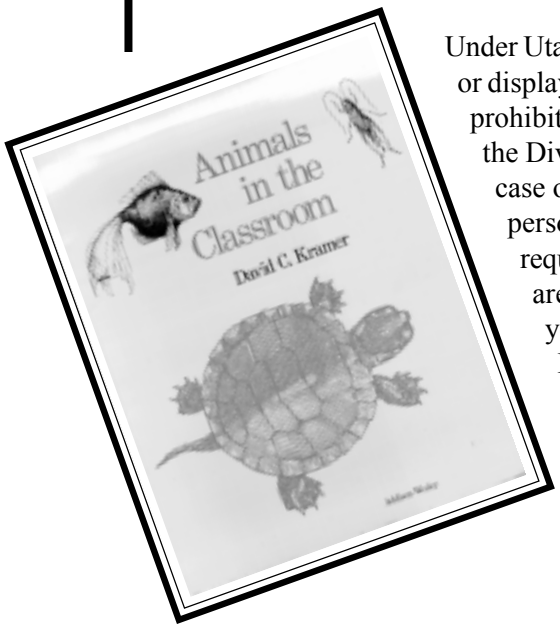
Animals in the Classroom

Some of the most rewarding childhood experiences, both in and out of the classroom, come from a child's interaction with live animals. Those interactions may be as simple as catching crickets on a summer afternoon, or as grand as witnessing the antics of a grizzly sow and her cubs. Whatever the interaction, animals fascinate children.

Animals can be studied and observed in many ways. Few of those, however, rival the experience of having live animals available in the classroom to study at close range. Keeping animals in the classroom is not only an exercise in fun for the children, it is also an educationally sound means of promoting learning, and is consistent with what is known about how children learn. When done correctly, valuable lessons can be taught. Responsibility and concern for living things, as well as ecological concepts, can be readily conveyed with live animals in the classroom. When done incorrectly, however, a disregard for animal welfare and irresponsibility are the unfortunate lessons learned. Sadly, this is often the case as animals are kept under improper conditions, fed the wrong foods and neglected during long weekends and school vacations.

The keeping of live animals in the classroom requires a significant amount of planning and preparation in order to be successful. In his excellent work, *Animals in the Classroom: Selection, Care and Observations*, Dr. David C. Kramer explores the scientific and moral issues surrounding this topic. Dr. Kramer discusses the pros and cons of keeping animals, and gives important insights developed after a lifetime as an inveterate collector of animals. Included in this work are detailed instructions on obtaining and caring for over 25 species of animals suitable for a classroom environment. Dr. Kramer's book is available from the Addison-Wesley Publishing Company, or is available for check-out from Project WILD.

In July 1991, the National Science Teacher's Association (NSTA) Board of Directors adopted a position statement entitled *Guidelines for Responsible Use of Animals in the Classroom*. This statement spells out the specific duties that NSTA feels teachers should adhere to in using animals in classroom settings. Issues of cleanliness and student safety are discussed, as are issues regarding care and disposition of animal specimens. A complete copy of this position statement is found in the back of your Project WILD K-12 Guide (page 343 in the recent editions).



Under Utah law (R657-3), individuals are prohibited from collecting, possessing or displaying any wildlife (or parts of dead wildlife) listed as controlled or prohibited, without first obtaining a Certificate of Registration (COR) from the Division of Wildlife Resources. Under certain circumstances, as in the case of most wild birds, a Federal permit may also be required before a person can legally possess an animal or any of its parts. In that the legal requirements and classifications (noncontrolled, controlled or prohibited) are somewhat convoluted and difficult to understand, we encourage you to contact Suzanne McMullin of the Division of Wildlife Resources at (801) 538-4701 before collecting any living or dead wildlife or their parts for use in the classroom. Suzanne can help you decide if you need a COR, and can help you apply for one if you do.

project WILD®

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